

## ABSTRACT

A Si etching method etches a Si wafer held on a susceptor placed in a processing vessel by a plasma-assisted etching process. A mixed etching gas prepared by mixing fluorosulfur gas, such as  $\text{SF}_6$  gas, or fluorocarbon gas,  $\text{O}_2$  gas and fluorosilicon gas, such as  $\text{SiF}_4$  gas is supplied into the processing vessel. RF power of 40 MHz or above is applied to the mixed etching gas to generate a plasma. The Si wafer is etched with radicals and ions contained in the plasma.